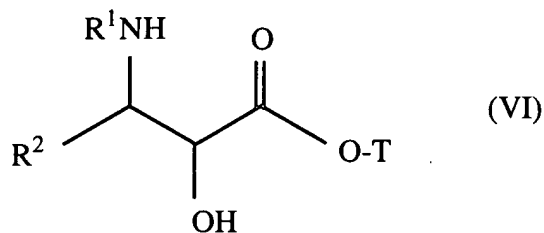


What is claimed is

1. A method for the preparation of a compound of the following formula VI or salt thereof:

5



where

R¹ is hydrogen, arylcarbonyl, alkoxycarbonyl or alkylcarbonyl;

10

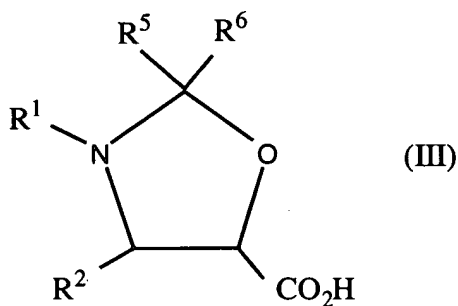
R² is aryl, heterocyclo or alkyl; and

T is a taxane moiety directly bonded at C-13 of said moiety;

comprising the steps of:

15

(a) contacting a compound of the following formula III or salt thereof:



20 where

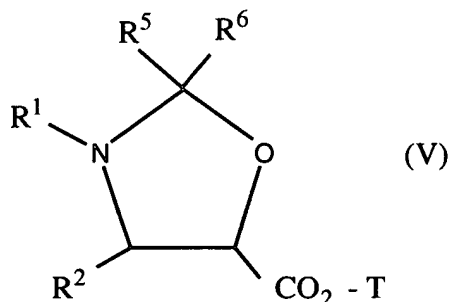
R¹ and R² are as defined above; and

R⁵ and R⁶ are (a) each independently alkyl; or (b) together with the carbon atom to which they are bonded, form a cycloalkyl, cycloalkenyl or heterocyclo group;

with a compound of the following formula IV or salt thereof:



- 5 where T is as defined above, in the presence of a coupling agent, to form a compound of the following formula V or salt thereof:



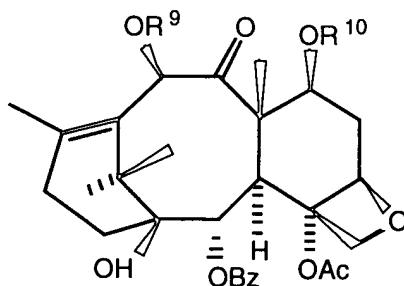
10

where R¹, R², R⁵, R⁶ and T are as defined above; and

- (b) contacting said compound of the formula V or salt thereof with a ring-opening agent, and, optionally, deprotecting one or more protected hydroxyl groups, to form
15 said compound of the formula VI or salt thereof.

2. The method of claim 1, wherein

- 20 R¹ is arylcarbonyl or alkyloxycarbonyl;
R² is phenyl, thienyl or furyl;
R⁵ and R⁶ are each independently unsubstituted lower alkyl; and
T is the moiety:



where

R^9 is hydrogen, alkylcarbonyl, or a hydroxyl protecting group; and

5 R^{10} is hydrogen or a hydroxyl protecting group.

3. The method of claim 1, wherein said coupling agent comprises a carbodiimide, employed together with 1-hydroxybenzotriazole or N-hydroxysuccinimide; or a carbodiimide, bis(2-oxo-3-oxazolidinyl)phosphinic chloride, 10 carbonyl diimidazole, pivaloyl chloride, or 2,4,6-trichlorobenzoyl chloride, wherein the aforementioned compounds are employed together with an amine.

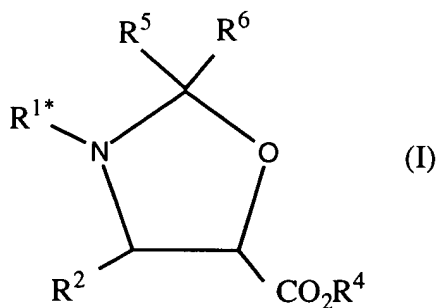
15 4. The method of claim 1, wherein said ring-opening agent is a Lewis acid.

5. The method of claim 4, wherein said Lewis acid is $\text{Pd}(\text{CH}_3\text{CN})_2\text{Cl}_2$.

20

6. The method of claim 1, wherein said compound of the formula VI is paclitaxel.

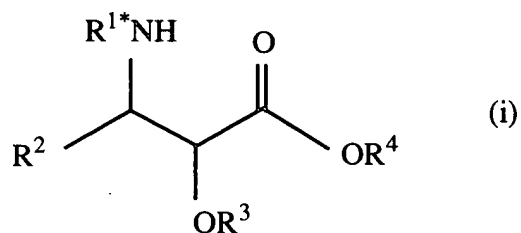
7. The method of claim 1, wherein R^1 is the group 25 R^{1*} in said compound of the formula III or salt thereof, and wherein said compound of the formula III or salt thereof is prepared by a method comprising the step of contacting a compound of the following formula I or salt thereof:



where

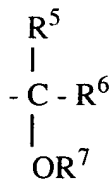
- 5 R^2 , R^5 and R^6 are as defined above;
 R^4 is alkyl, alkenyl, alkynyl, aryl, cycloalkyl,
cycloalkenyl, or heterocyclo; and
 R^{1*} is hydrogen, arylcarbonyl, alkoxy carbonyl or
alkylcarbonyl, with the proviso that R^{1*} is not
10 tert-butoxycarbonyl when R^2 is aryl;
with a hydrolyzing agent.

8. The method of claim 7, wherein said compound
of the formula I or salt thereof is prepared by a method
15 comprising the step of contacting a compound of the
following formula i or salt thereof:



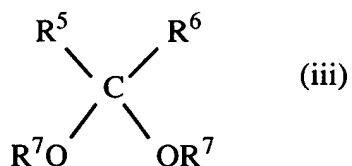
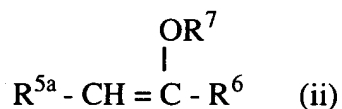
20 where

- R^{1*} , R^2 and R^4 are as defined above; and
 R^3 is hydrogen or the group R^3P , where R^3P is the group:



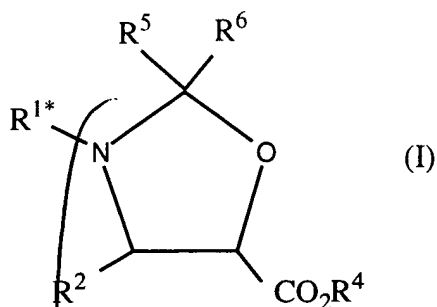
where R^5 and R^6 are as defined above, and R^7 is alkyl or aryl;

- 5 with an acid catalyst, and additionally, where R^3 is hydrogen, with a compound of the formula ii or iii:



10 where R^5 , R^6 and R^7 are as defined above, and where R^{5a} (i) is a group such that $\text{R}^{5a}-\text{CH}_2-$ is R^5 or (ii) forms, together with R^6 and the atoms to which R^{5a} and R^6 are bonded, a
15 cycloalkenyl or heterocyclo group containing at least one carbon to carbon double bond.

20 9. A compound of the following formula I or salt thereof:



where

R^{1*} is hydrogen, arylcarbonyl, alkoxy carbonyl or
 5 alkylcarbonyl, with the proviso that R^{1*} is not
 tert-butoxycarbonyl when R² is aryl;

R² is aryl, heterocyclo or alkyl;

R⁴ is hydrogen, alkyl, alkenyl, alkynyl, aryl, cycloalkyl,
 cycloalkenyl, or heterocyclo; and

10 R⁵ and R⁶ are (a) each independently alkyl; or (b) together
 with the carbon atom to which they are bonded, form a
 cycloalkyl, cycloalkenyl or heterocyclo group.

15 10. A compound of claim 9 which is selected from
 the group consisting of:

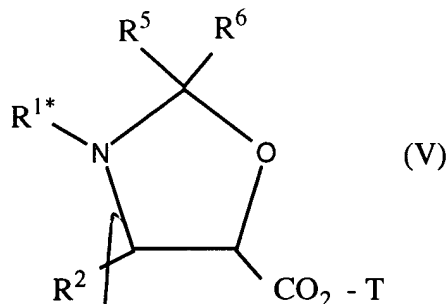
(4*S-trans*)-3-benzoyl-2,2-dimethyl-4-phenyl-5-
 oxazolidinecarboxylic acid, ethyl ester;

20 (4*S-trans*)-3-benzoyl-2,2-dimethyl-4-phenyl-5-
 oxazolidinecarboxylic acid, lithium salt; and

(4*S-trans*)-3-benzoyl-2,2-dimethyl-4-phenyl-5-
 oxazolidinecarboxylic acid.

25

11. A compound of the following formula V or salt
 thereof:



where

R^{1*} is hydrogen, arylcarbonyl, alkoxycarbonyl or
 5 alkylcarbonyl, with the proviso that R^{1*} is not
 tert-butoxycarbonyl when R² is aryl;

R² is aryl, heterocyclo or alkyl;

R⁵ and R⁶ are (a) each independently alkyl; or (b) together
 with the carbon atom to which they are bonded, form a
 10 cycloalkyl, cycloalkenyl or heterocyclo group; and

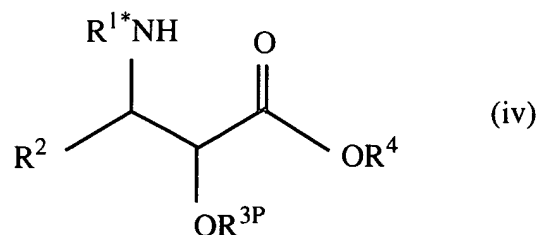
T is a taxane moiety directly bonded at C-13 of said
 moiety.

12. A compound of claim 11 which is

15 [2aR-(2a α , 4 β , 4a β , 6 β , 9 α (4S*, 5R*), -11 α , 12 α , 12a α , 12b α)] -
 3-benzoyl-2,2-dimethyl-4-phenyl-5-oxazolidinecarboxylic acid
 6,12b-bis(acetyloxy)-12-(benzoyloxy) -
 2a,3,4,4a,5,6,9,10,11,12,12a,12b-dodecahydro-11-hydroxy-
 20 4a,8,13,13-tetramethyl-5-oxo-4-[(triethylsilyl)oxy]-7,11-
 methano-1H-cyclodeca[3,4]benz[1,2-b]oxet-9-yl ester.

13. A compound of the following formula iv or
 salt thereof:

25



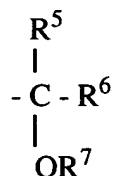
where

- 5 R^1 is hydrogen, arylcarbonyl, alkoxy carbonyl or alkylcarbonyl, with the proviso that R^1 is not tert-butoxycarbonyl when R^2 is aryl;

R^2 is aryl, heterocyclo or alkyl;

R^4 is hydrogen, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, cycloalkenyl, or heterocyclo; and

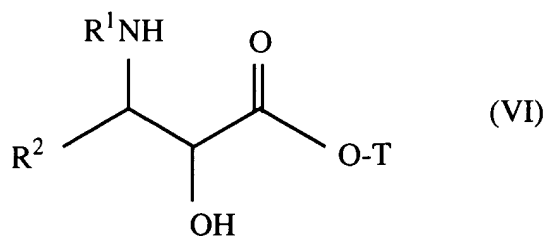
- 10 $\text{R}^{3\text{P}}$ is the group:



where

- 15 R^5 and R^6 are (a) each independently alkyl; or (b) together with the carbon atom to which they are bonded, form a cycloalkyl, cycloalkenyl or heterocyclo group; and R^7 is alkyl or aryl.

- 20 14. A method for the preparation of a compound of the following formula VI or a salt thereof:



where

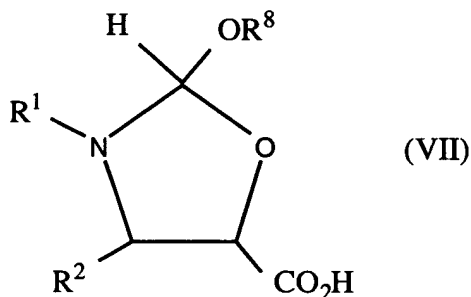
R¹ is hydrogen, arylcarbonyl, alkoxycarbonyl or
5 alkylcarbonyl;

R² is aryl, heterocyclo or alkyl; and

T is a taxane moiety directly bonded at C-13 of said
moiety;

comprising the steps of:

- 10 (a) contacting a compound of the following
formula VII or salt thereof:



15 where

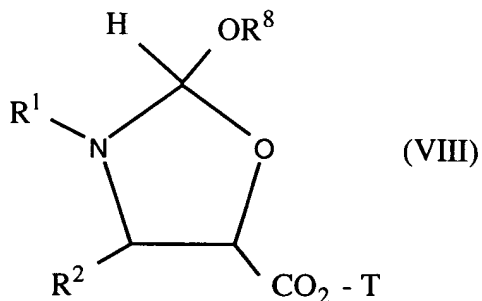
R¹ and R² are as defined above; and

R⁸ is alkyl or aryl;

with a compound of the following formula IV or salt thereof:

20 HO - T (IV) ,

where T is as defined above, in the presence of a coupling
agent, to form a compound of the following formula VIII or
salt thereof:



where R¹, R², R⁸ and T are as defined above; and

- 5 (b) contacting said compound of the formula VIII or salt thereof with a ring-opening agent, and, optionally, deprotecting one or more protected hydroxyl groups, to form said compound of the formula VI or salt thereof.

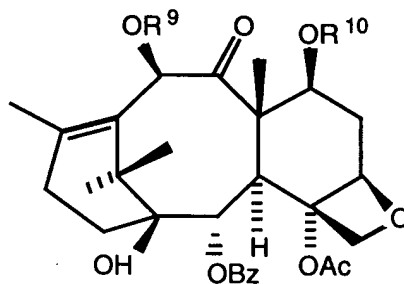
- 10 15. The method of claim 14, wherein

R¹ is arylcarbonyl or alkylloxycarbonyl;

R² is phenyl, thienyl or furyl;

R⁸ is alkyl or aryl; and

- 15 T is the moiety:



where

- 20 R⁹ is hydrogen, alkylcarbonyl, or a hydroxyl protecting group; and

R¹⁰ is hydrogen or a hydroxyl protecting group.

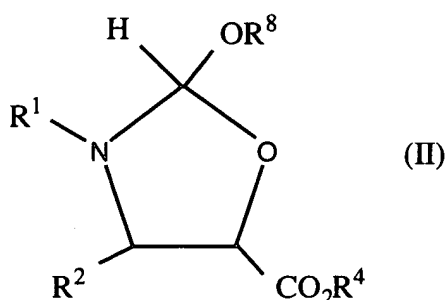
16. The method of claim 14, wherein said coupling agent comprises a carbodiimide, bis(2-oxo-3-oxazolidinyl)phosphinic chloride), carbonyl diimidazole, pivaloyl chloride, or 2,4,6-trichlorobenzoyl chloride; wherein the aforementioned compounds are employed together with 1-hydroxybenzotriazole, N-hydroxysuccinimide, or an amine.

17. The method of claim 14, wherein said ring-opening agent is a protic acid.

18. The method of claim 17, wherein said protic acid is an organic carboxylic acid and/or an aqueous mineral acid.

19. The method of claim 14, wherein said compound of the formula VI is paclitaxel or taxotere.

20. The method of claim 14, wherein said compound of the formula VII or salt thereof is prepared by a method comprising the step of contacting a compound of the following formula II or salt thereof:

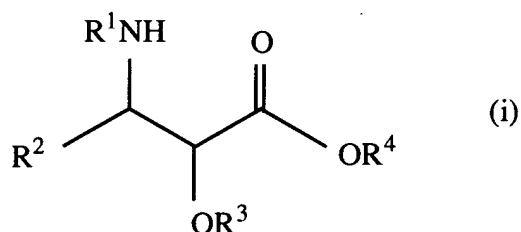


25

where R¹, R² and R⁸ are as defined above; and R⁴ is alkyl, alkenyl, alkynyl, aryl, cycloalkyl, cycloalkenyl, or heterocyclo;

with a hydrolyzing agent.

21. The method of claim 20, wherein said compound of the formula II or salt thereof is prepared by a method comprising the step of contacting a compound of the following formula i or salt thereof:

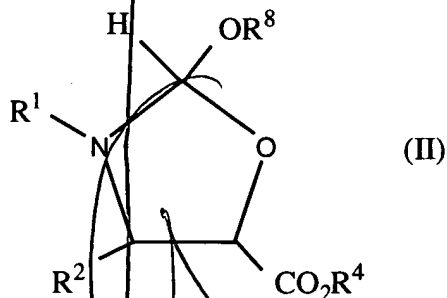


- 10 where R^1 , R^2 and R^4 are as defined above; and R^3 is hydrogen; with an acid catalyst and a compound of the following formula vi:



where R^8 is as defined above.

22. A compound of the following formula II or salt thereof:



where

R¹ is hydrogen, arylcarbonyl, alkoxycarbonyl or alkylcarbonyl;

R² is aryl, heterocyclo or alkyl;

R⁴ is hydrogen, alkyl, alkenyl, alkynyl, aryl,

5 cycloalkyl, cycloalkenyl, or heterocyclo; and

R⁸ is alkyl or aryl.

23. A compound of claim 22 which is selected from the group consisting of:

10

(4*S*,5*R*)-3-benzoyl-2-ethoxy-4-phenyl-5-oxazolidinecarboxylic acid, ethyl ester;

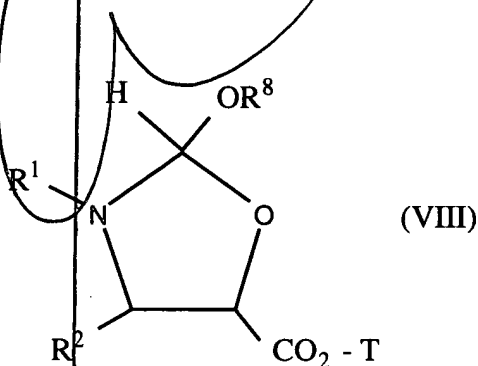
15

(4*S*,5*R*)-3-benzoyl-2-methoxy-4-phenyl-5-oxazolidinecarboxylic acid, ethyl ester; and

(4*S*,5*β*)-3-benzoyl-2-methoxy-4-phenyl-5-oxazolidinecarboxylic acid.

20

24. A compound of the following formula VIII or salt thereof:



25 where

R¹ is hydrogen, arylcarbonyl, alkoxycarbonyl or alkylcarbonyl;

R^2 is aryl, heterocyclo or alkyl;

R^8 is alkyl or aryl; and

T is a taxane moiety directly bonded at C-13 of said moiety.

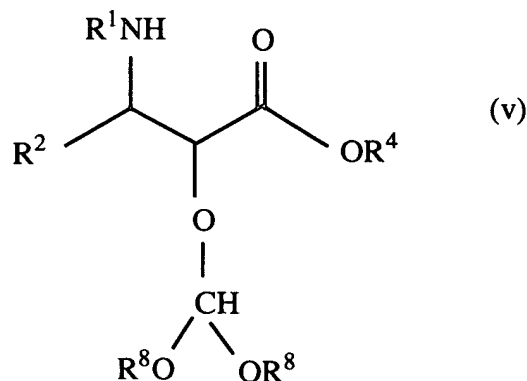
5

25. A compound of claim 24 which is

[2aR-(2a α , 4 β , 4a β , 6 β , 9 α (4S*, 5R*), -11 α , 12 α , 12a α , 12b α)]-
3-benzoyl-2-methoxy-4-phenyl-5-oxazolidinecarboxylic acid
10 6,12b-bis(acetyloxy)-12-(benzoyloxy)-
2a,3,4,4a,5,6,9,10,11,12,12a,12b-dodecahydro-11-hydroxy-
4a,8,13,13-tetramethyl-5-oxo-4-[(triethylsilyl)oxy]-7,11-
methano-1H-cyclodeca[3,4]benz[1,2-b]oxet-9-yl ester.

15

26. A compound of the following formula v or salt thereof:



20 where

R^1 is hydrogen, arylcarbonyl, alkoxycarbonyl or alkylcarbonyl;

R^2 is aryl, heterocyclo or alkyl;

25 R^4 is hydrogen, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, cycloalkenyl, or heterocyclo; and

R^8 is alkyl or aryl.